

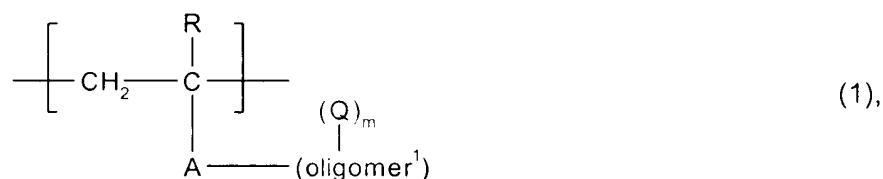
**CLAIM AMENDMENTS**

Please cancel claims 1-3, and 13-14 and amend claims 4-5, 7-8, 11-12, and 15-17 as follows.

1-3. (Cancelled currently)

4. (Amended) A process according to any one of claims 1 to 3 for coating a material surface comprising the steps of:

(a) applying to the material surface at least one comb-type polymers comprising a polymer backbone and side chains pendently attached thereto, wherein at least a part of the side chains carry a triggerable precursor for carbene or nitrene formation, wherein the comb-type polymer according to step (a) comprises units of formula



wherein R is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl<sub>1</sub>;

A is a radical of formula

- C(O) - X - (2a),
- C(O) - O - (CH<sub>2</sub>)<sub>r</sub> - CH(OH) - CH<sub>2</sub> - X - (2b),
- C(O) - NH - (alk') - C(O) - X - (2c),
- C(O) - O - (alk'') - NH - C(O) - X - (2d),
- C(O) - X - (alk'') - X<sub>1</sub> - C(O) - (2e),
- C(O) - NH - C(O) - X - (2f),
- (alk''')<sub>s</sub> - X - D - X<sub>1</sub> - (2g)
- X - (alk') - X<sub>1</sub> - (2h),
- X - C(O) - (2i),
- (alk''') - C(O) - X - (2j) or
- (alk''') - X - C(O) - (2k),

wherein (alk') is C<sub>1</sub>-C<sub>6</sub>-alkylene<sub>1</sub>; (alk'') is C<sub>2</sub>-C<sub>12</sub>-alkylene<sub>1</sub>; (alk''') is C<sub>1</sub>-C<sub>6</sub>-alkylene<sub>1</sub>; D is a group -C(O)- or -C(S)- and s is 0 or 1<sub>1</sub>;

X and X<sub>1</sub> are each independently a group -O- or -NR<sub>1</sub>-, wherein R<sub>1</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl<sub>1</sub>; (oligomer<sup>1</sup>) is the radical of

(i) a hydrophilic telomer which is derived from one or more different copolymerizable vinyl monomers,

(ii) the radical of an oligosaccharide<sub>1</sub>;

(iii) the radical of an oligopeptide<sub>1</sub>; or

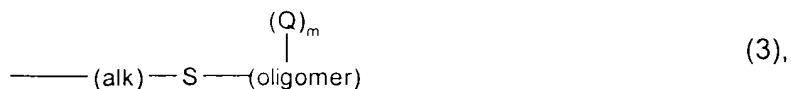
(iv) the radical of a polyalkylene oxide<sub>1</sub>;

Q is a radical comprising a triggerable precursor for carbene or nitrene formation<sub>1</sub>;

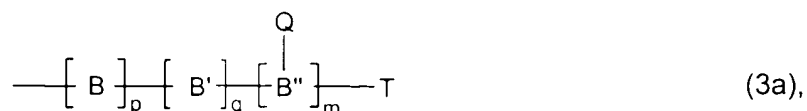
r is an integer from 1 to 4; and m is an integer ≥ 1;

(b) fixing the polymer(s) onto the material surface using UV or visible light.

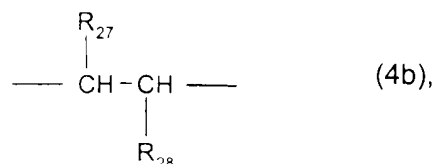
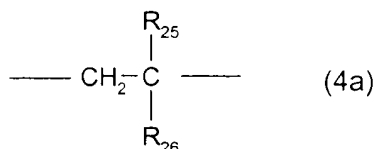
5. (Amended) A process according to claim 14, wherein the radical -(oligomer<sup>1</sup>)-(Q)<sub>m</sub> corresponds to a radical of formula



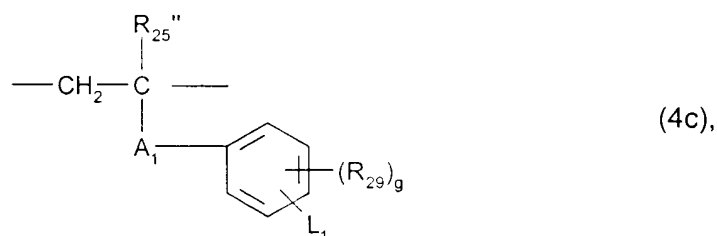
wherein (alk) is C<sub>2</sub>-C<sub>6</sub>-alkylene and (oligomer)-(Q)<sub>m</sub> corresponds to formula



wherein B and B' are each independently of the other a radical of formula



wherein R<sub>25</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, R<sub>26</sub> is a hydrophilic substituent; R<sub>27</sub> is C<sub>1</sub>-C<sub>4</sub>-alkyl, phenyl or a radical -C(O)OY<sub>9</sub>, wherein Y<sub>9</sub> is hydrogen or unsubstituted or hydroxy-substituted C<sub>1</sub>-C<sub>4</sub>-alkyl; and R<sub>28</sub> is a radical -C(O)OY<sub>9</sub>' or -CH<sub>2</sub>-C(O)OY<sub>9</sub>' wherein Y<sub>9</sub>' independently has the meaning of Y<sub>9</sub>; B"-Q is a 1,2-ethylene radical of formula



wherein R<sub>25</sub>' is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl,  
A<sub>1</sub> is a linking member of formula

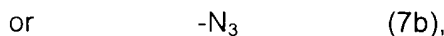
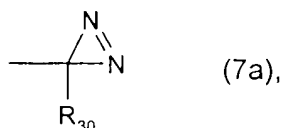
- $$\begin{aligned}
 & - \text{C(O)} - \text{X}' - & (6a), \\
 & - (\text{CH}_2)_t - \text{X}' - \text{C(O)} - & (6b), \\
 & - \text{C(O)} - \text{X}' - (\text{Alk}) - \text{X}_2 - \text{C(O)} - & (6c), \\
 & - (\text{CH}_2)_t - \text{X}' - \text{D}_1 - \text{NH} - & (6d), \\
 & - \text{C(O)} - \text{X}' - (\text{Alk}) - \text{X}_2 - \text{A}_2 - \text{NH} - & (6e), \text{ or} \\
 & - (\text{CH}_2)_t - \text{X}' - \text{CH}_2 - \text{CH(OH)} - \text{CH}_2 - & (6f),
 \end{aligned}$$

X' and X<sub>2</sub> are each independently a group -O- or -NR<sub>1</sub>'-, R<sub>1</sub>' is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl; D<sub>1</sub> is a group -C(O)- or -C(S)-, (Alk) is C<sub>2</sub>-C<sub>12</sub>-alkylene, t is 0 or 1,

R<sub>29</sub> is C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, amino, hydroxy, sulfo, nitro, trifluoromethyl or halogen,

$q$  is an integer from 0 to 2,

$L_1$  is a group of formula

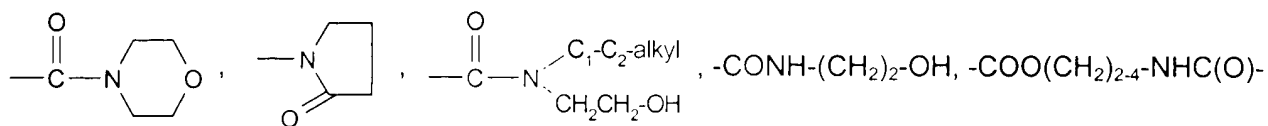


R<sub>30</sub> is fluorinated C<sub>1</sub>-C<sub>6</sub>-alkyl,

p and q are each independently of another an integer from 0 to 250, wherein the total of (p+q) is an integer from 2 to 250, m is an integer from 1 to 3, and

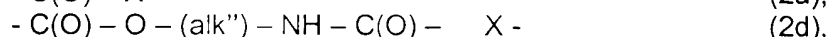
T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator.

6. (Originally filed) A process according to claim 5, wherein B and B' are each independently a radical of formula (4a), R<sub>25</sub> is hydrogen or methyl, and R<sub>26</sub> is a radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub>,

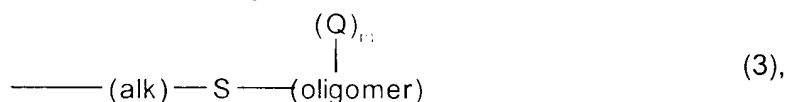


O-G, wherein -O-G is the radical of trehalose, -COOH, -NH<sub>2</sub>, -CH<sub>2</sub>-NH<sub>2</sub>, -CH<sub>2</sub>-N(CH<sub>3</sub>)<sub>2</sub>, -C(O)NH-(CH<sub>2</sub>)<sub>2</sub>-3-NH<sub>2</sub>, -C(O)O-(CH<sub>2</sub>)<sub>2</sub>-3-NH<sub>2</sub>, -COO-(CH<sub>2</sub>)<sub>2</sub>-N(CH<sub>3</sub>)<sub>2</sub> or -C(O)O-CH<sub>2</sub>-CH(OH)-CH<sub>2</sub>-N(CH<sub>3</sub>)<sub>3</sub><sup>+</sup>An<sup>-</sup>, wherein An<sup>-</sup> is an anion.

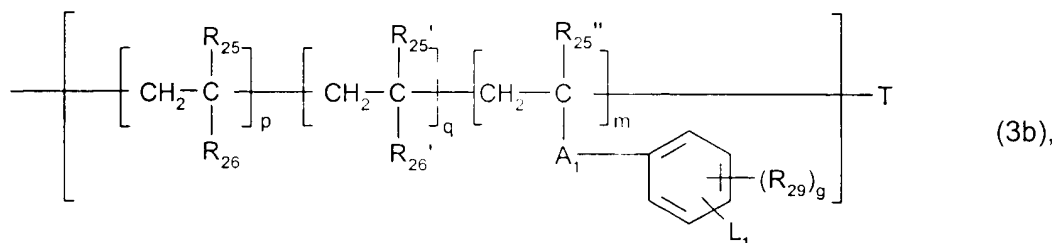
7. (Amended) A process according to any one of claims 4 to 6, wherein in the polymer units of formula (1) R is hydrogen or methyl, A is a radical of formula



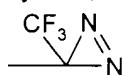
(alk'') is C<sub>2</sub>-C<sub>4</sub>-alkylene; X is -NH-; and (oligomer<sup>1</sup>)-(Q)<sub>m</sub> is a telomer radical of formula




wherein (alk) is C<sub>2</sub>-C<sub>4</sub>-alkylene and (oligomer)-(Q)<sub>m</sub> corresponds to formula



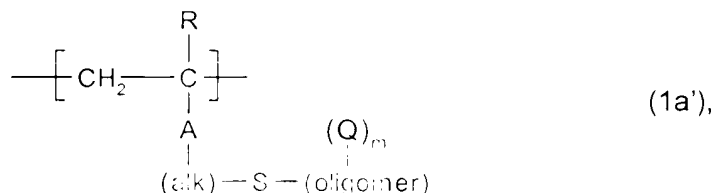
wherein R<sub>25</sub>, R<sub>25</sub>' and R<sub>25</sub>'' are each independently hydrogen or methyl, R<sub>26</sub> is a radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub> or N-pyrrolidonyl, R<sub>26</sub>' is -NH<sub>2</sub> or -C(O)X'-(Alk)-NH<sub>2</sub>, X' is -O- or -NH-, (Alk) is C<sub>2</sub>-C<sub>3</sub>-alkylene, A<sub>1</sub> is a radical -NH-C(O)- or -C(O)-NH-(CH<sub>2</sub>)<sub>2-4</sub>-NH-C(O)-, q is 0, L<sub>1</sub> is a radical



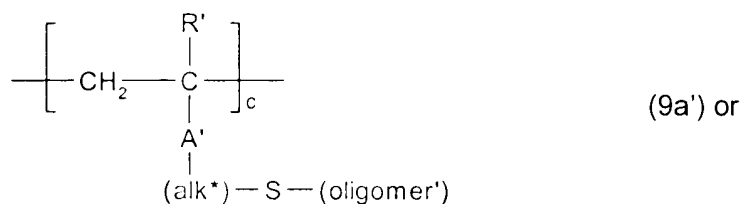

 or -N<sub>3</sub>, p and q are each independently an integer from 0 to 150, wherein the total of (p+q) is an integer from 2 to 150, m is an integer from 1 to 3, and T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator.

8. (Amended) A process for coating a material surface, comprising the steps of:

(a) applying to the material surface at least one comb-type polymer comprising a polymer backbone and side chains pendently attached thereto, wherein at least a part of the side chains carry a triggerable precursor for carbene or nitrene formation according to any one of claims 1 to 7, wherein the comb-type polymer according to step (a) is a polymer comprising units of formula



and optionally



wherein R, R' and R<sub>25a</sub> are each independently hydrogen or methyl,

R<sub>26a</sub> is a radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub> or N-pyrrolidonyl,

A and A' are each independently a radical of the above formula

- C(O) - X - (2a),

- C(O) - NH - (alk') - C(O) - X - (2c),

- C(O) - O - (alk'') - NH - C(O) - X - (2d),

- X - C(O) - (2i) or

- (alk''') - X - C(O) - (2k) given in claim 4,

wherein X is a group -O- or -NH-,

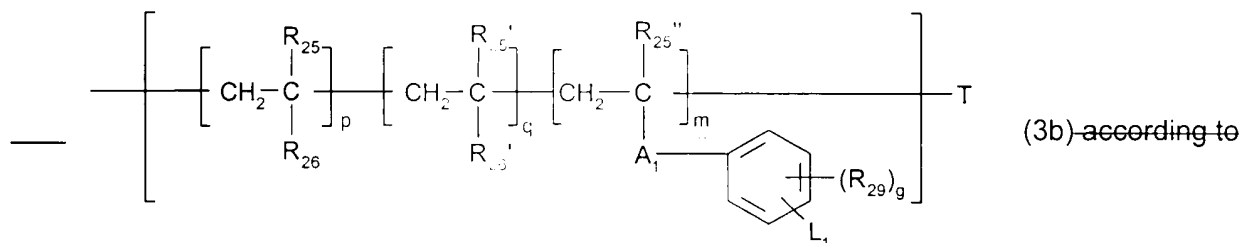
(alk'') is C<sub>2</sub>-C<sub>4</sub>-alkylene,

(alk') is a radical -CH<sub>2</sub>- or -C(CH<sub>3</sub>)<sub>2</sub>-, and

(alk''') is C<sub>1</sub>-C<sub>2</sub>-alkylene,

(alk) and (alk\*) are each independently C<sub>2</sub>-C<sub>4</sub>-alkylene,

(oligomer)-(Q)<sub>m</sub> is a radical of formula



wherein R<sub>25</sub>, R<sub>25</sub>' and R<sub>25</sub>'' are each independently hydrogen or methyl, R<sub>26</sub> is a

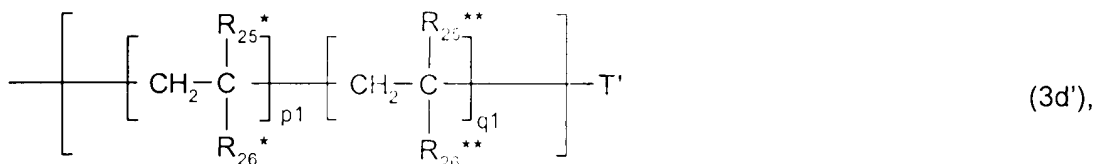
radical -CONH<sub>2</sub>, -CON(CH<sub>3</sub>)<sub>2</sub> or N-pyrrolidonyl, R<sub>26</sub>' is -NH<sub>2</sub> or -C(O)X'-(Alk)-NH<sub>2</sub>, X'

is -O- or -NH-, (Alk) is C<sub>2</sub>-C<sub>3</sub>-alkylene, A<sub>1</sub> is a radical -NH-C(O)- or -C(O)-NH-

(CH<sub>2</sub>)<sub>2-4</sub>-NH-C(O)-, g is 0, L<sub>1</sub> is a radical  or -N<sub>3</sub>, p and q are each

independently an integer from 0 to 150, wherein the total of (p+q) is an integer from 2 to 150, m is an integer from 1 to 3, and T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator claim 7, and

(oligomer') is a radical of formula



wherein  $\text{R}_{25}^*$  and  $\text{R}_{25}^{**}$  are each independently hydrogen or methyl,  $\text{R}_{26}^*$  and  $\text{R}_{26}^{**}$  are each independently a radical  $-\text{CONH}_2$ ,  $-\text{CON}(\text{CH}_3)_2$  or N-pyrrolidonyl,  $p1$  and  $q1$  are each independently an integer of from 0 to 150 and the total of  $(p1+q1)$  is an integer from 2 to 150, and  $\text{T}'$  is a monovalent group that is suitable to act as a polymerization chain-reaction terminator.

9. (Originally filed) A process according to claim 8, wherein the comb-type polymer according to step (a) essentially consists of units of formula (1a').

10. (Originally filed) A process according to claim 8, wherein the comb-type polymer according to step (a) essentially consists of units of formula (1a') and optionally (9a').

11. (Amended) A process according to any one of claim ~~4s~~ 1 to 10, wherein the material surface to be coated is the surface of a biomedical device, particularly a contact lens, intraocular lens or artificial cornea.

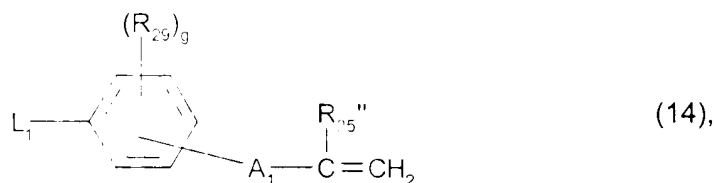
12. (Amended) A composite material comprising

(i) an inorganic or organic bulk material; and

(ii) a hydrophilic surface coating obtainable by the process according to ~~any one of claims 8~~ 4 to 44.

13-14. (Cancelled currently)

15. (Amended) A compound of formula



wherein

A<sub>1</sub> is a linking member of formula

- C(O) - X' - (6a),

- (CH<sub>2</sub>)<sub>t</sub> - X' - C(O) - (6b),

- C(O) - X' - (Alk) - X<sub>2</sub> - C(O) - (6c),

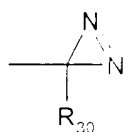
- (CH<sub>2</sub>)<sub>t</sub> - X' - D<sub>1</sub> - NH - (6d),

- C(O) - X' - (Alk) - X<sub>2</sub> - A<sub>2</sub> - NH - (6e), or

- (CH<sub>2</sub>)<sub>t</sub> - X' - CH<sub>2</sub> - CH(OH) - CH<sub>2</sub> - (6f),

wherein X' and X<sub>2</sub> are each independently a group -O- or -NR<sub>1</sub>'-, R<sub>1</sub>' is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl; D<sub>1</sub> is a group -C(O)- or -C(S)-, (Alk) is C<sub>2</sub>-C<sub>12</sub>-alkylene, t is 0 or 1,

L<sub>1</sub> is a group of formula



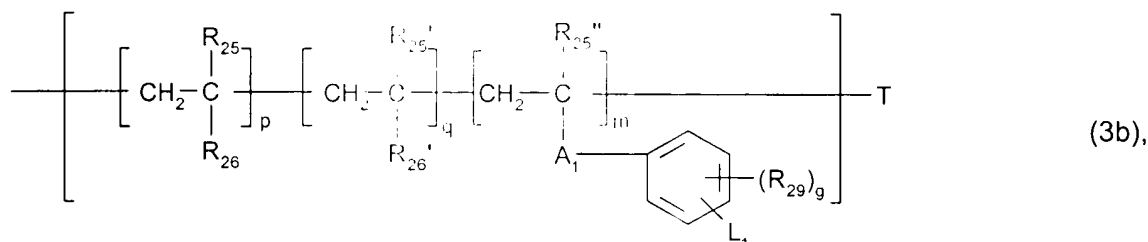
(7c), or -N<sub>3</sub> (7b),

R<sub>25</sub>" is hydrogen or C<sub>1</sub>-C<sub>7</sub>-alkyl,  
R<sub>29</sub> is C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>3</sub>-alkoxy, amino, hydroxy, sulfo, nitro, trifluoromethyl or halogen,  
g is an integer from 0 to 2, and  
R<sub>30</sub> is fluorinated C<sub>1</sub>-C<sub>7</sub>-alkyl are each as defined in claim 5.

16. (Amended) A telomer of formula



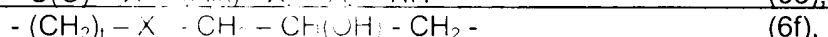
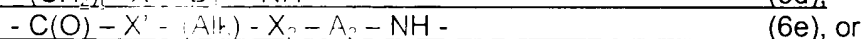
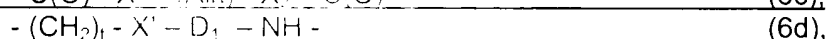
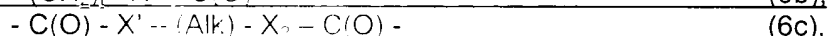
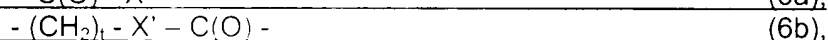
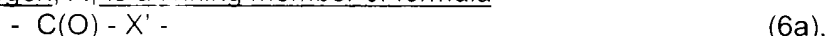
wherein A<sub>4</sub> is hydroxy, amino, carboxy or a derivative thereof, (alk) is C<sub>2</sub>-C<sub>6</sub>-alkylene, and (oligomer)-[Q]<sub>m</sub> is a radical of formula



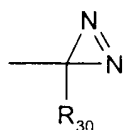
wherein R<sub>25</sub>, R<sub>25</sub>' and R<sub>25</sub>'' are each independently hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, R<sub>26</sub> and R<sub>26</sub>' are each independently a hydrophilic substituent.

p and q are each independently of another an integer from 0 to 250, wherein the total of (p+q) is an integer from 2 to 250, m is an integer  $\geq 1$ ,

T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator, and R<sub>25</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, R<sub>26</sub> is C<sub>1</sub>-C<sub>3</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, amino, hydroxy, sulfo, nitro, trifluoromethyl or halogen, A<sub>1</sub> is a linking member of formula

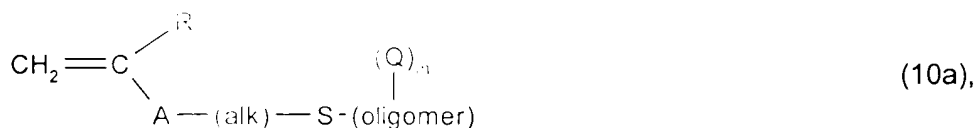


X' and X<sub>2</sub> are each independently a group -O- or -NR<sub>1</sub>'-, R<sub>1</sub>' is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl; D<sub>1</sub> is a group -C(O)- or -C(S)-, (Alk) is C<sub>1</sub>-C<sub>4</sub>-alkylene, t is 0 or 1, L<sub>1</sub> is a group of formula

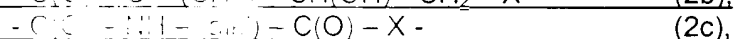


~~R<sub>30</sub> is fluorinated C<sub>1</sub>-C<sub>6</sub>-alkyl and g is an integer from 0 to 2 are each as defined in claim 5.~~

17. (Amended) A macromonomer of formula

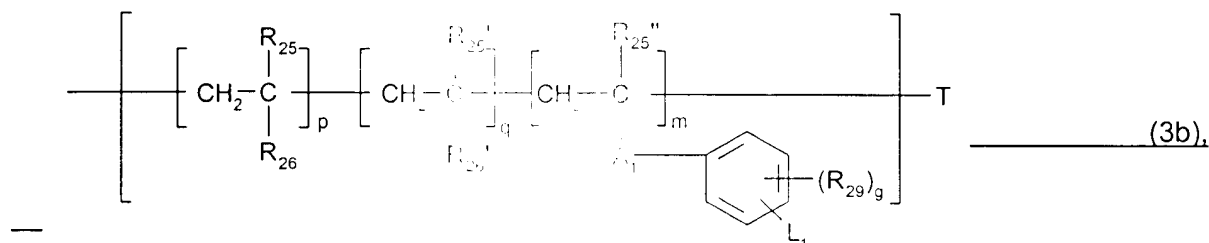


wherein R is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, (alk) is C<sub>1</sub>-C<sub>6</sub>-alkylene, A is a radical of formula (2a) — (2k) given in claim 4



- C(O) - O - (alk'') - NH - C(O) - X -	(2d),
- C(O) - X - (alk'') - X <sub>1</sub> - C(O) -	(2e),
- C(O) - NH - C(O) - X -	(2f),
- (alk'') <sub>s</sub> - X - D - X <sub>1</sub> -	(2g),
- X - (alk') - X <sub>1</sub> -	(2h),
- X - C(O) -	(2i),
- (alk'') - C(O) - X -	(2j) or
- (alk'') - X - C(O) -	(2k),

wherein r is an integer from 1 to 4, (alk') is C<sub>1</sub>-C<sub>6</sub>-alkylene, (alk'') is C<sub>2</sub>-C<sub>12</sub>-alkylene, (alk''') is C<sub>1</sub>-C<sub>6</sub>-alkylene, D is a group -C(O)- or -C(S)-, and s is 0 or 1, X and X<sub>1</sub> are each independently a group -C- or -NR<sub>1</sub>-, wherein R<sub>1</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, and (oligomer)-(Q)<sub>m</sub> is a radical of formula (3b) given in claim 16.



wherein R<sub>25</sub>, R<sub>25</sub>' and R<sub>25</sub>'' are each independently hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, R<sub>26</sub> and R<sub>26</sub>' are each independently a hydrophilic substituent,

p and q are each independently of another an integer from 0 to 250, wherein the total of (p+q) is an integer from 2 to 250, m is an integer ≥ 1,

T is a monovalent group that is suitable to act as a polymerization chain-reaction terminator, and R<sub>25</sub>'' is hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, R<sub>29</sub> is C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, amino, hydroxy, sulfo, nitro, trifluoromethyl or halogen.

18. (Cancelled previously)